WASHINGTON DEPARTMENT OF ECOLOGY
MAIL STOP 47600
OLYMPIA, WASHINGTON 98504

IN THE MATTER OF AIR EMISSIONS FROM:

WestRock CP, LLC
801 Portland Avenue
Tacoma, WA 98421

NOC ORDER No. DE 01AQIS-3114
Modification 1

DESCRIPTION

WestRock CP, LLC (WestRock), previously Simpson Tacoma Kraft Company, operates an integrated pulp and paper mill on approximately 60 acres adjacent to the mouth of the Puyallup River on Commencement Bay in Tacoma, Washington. The mill uses the Kraft process to produce market pulp and paper for linerboard, bags, sacks, and similar food and industrial grade packaging. WestRock operates under Air Operating Permit (AOP) No. 0000850.

Notice of Construction (NOC) Approval Order No. DE 01AQIS-3114 was issued on July 25, 2001 in accordance with RCW 70.94.152, WAC 173-400-110, and WAC 173-460-040. NOC Order No. DE 01AQIS-3114 approved the replacement of two existing laminar air heaters at Recovery Furnace No.4 with an economizer.

On September 30, 2020 WestRock submitted a modification request revisions to NOC No. DE 01AQIS-3114 in accordance with WAC 173-400-111(8). Ecology made the following changes:

1. VOC stack testing frequencies at Recovery Furnace No.4, originally required semiannually, have been revised to be required annually.
2. The incorporation of changes made to Order No. DE 01AQIS-3114 made by reference in Order No. 1916-AQ05.

Based upon the NOC Application submitted by WestRock, Ecology finds the following. (Relevant findings from the initial NOC Order have been retained in this document for continuity.)

FINDINGS AND DESCRIPTION OF CHANGES

Pursuant to New Source Review (NSR) regulations in the Washington Administrative Code (WAC) 173-400-110 and 173-400-111 and based upon the complete NOC Application, Ecology finds the following:

1. <u>NOC Application Processing Timeline.</u> WestRock submitted an NOC Application to Ecology which was received via mail on September 30, 2020. The application requested the modification of NOC Order No. 4153-AQ07. Ecology reviewed the initial application and found it incomplete per WAC 173-400-111 on October 27, 2020. A final amended

application was postmarked on November 12, 2020 and received by Ecology. The application was determined to be complete on December 10, 2020.

2. Administrative Modification. The modification request is administrative in nature. No additional physical changes to emissions units or operations are proposed in the modification request. This order modification does not approve the emission of additional pollutants.

3. VOC Source Testing Frequency. WestRock requested that the VOC source testing frequency for Recovery Furnace No.4 be reduced from semiannually to annually. Ecology has made this change. WestRock submitted the information in Table 1 with their NOC modification application. Table 1 below shows that WestRock has operated well below the established limit from 2016 through 2020.

   Ecology has added additional language to this condition to specify that alternative test methods to EPA Method 25A must be approved by Ecology.

   Table 1. Historical VOC Testing Data for Recovery Furnace No.4

Test Date	Test Result (lb/ton black liquor solids)	Percent of Limit (0.50 lb/ton black liquor solids)
03/23/2016	0.038	8%
09/13/2016	0.060	12%
03/23/2017	0.024	5%
09/21/2017	0.230	46%
03/08/2018	0.065	13%
07/12/2018	0.0100	20%
03/27/2019	0.032	6%
08/14/2019	0.075	15%
03/06/2020	0.033	7%
08/25/2020	0.016	3%

4. Incorporation of Order No.1916-AQ05. Order No. 1916-AQ05 was issued on July 26, 2005. Order No, 1916-AQ05 modified several orders, including Order No. DE 01AQIS-3114. Order No.1916-AQ05 included an equation for the calculation of NO_x emissions from Recovery Furnace No.4 to determine compliance with the 515 tons/year NO_x limit in this permit. This algorithm has been incorporated into this modification of DE 01AQIS-3114. WestRock additionally requested that the NOx emission algorithm be modified to allow for the actual amount of black liquor solids to be used in the algorithm. This change has been made. The algorithm in Order No. 1916-AQ05 required WestRock to use a value of 3.41 million lbs of black liquor solids per day in the calculation.

5. State Environmental Protection Act (SEPA). The project complies with applicable SEPA requirements. A determination of nonsignificance (DNS) was issued for the project on July 25, 2001. A 30 day public comment period was held. As the amendments to the Order do not change the scope of the previously approved project and do not allow for an increase in emissions to the atmosphere, Ecology adopted the existing MDNS on date.

6. Additional Minor Changes. The following additional changes were made:

   - The previous order was written for Simpson Tacoma Kraft Company, LLC. The Order has been updated to reflect that the current Permittee is WestRock CP, LLC.

   - Condition No.2 of the original Order issued July 25, 2001 stated that the approval for construction shall become invalid if construction of the project is not commenced within eighteen (18) months after receipt of the final approval, or if construction of the facility is discontinued for a period eighteen (18) months. WestRock commenced construction of the project within eighteen (18) months after receipt of the final approval. The condition has been removed.

   - Condition No.3 of the original Order issued July 25, 2001 stated WestRock must surrender an Emission Reduction Credit certificate to the Department of Ecology in accordance with WAC 173-400-136(2). WestRock has already fulfilled this one-time requirement. The condition has been removed.

   - Additional minor changes have been made to make this document meet accessibility requirements under the Americans with Disabilities Act.

HISTORICAL FINDINGS

The following background information was included in the original NOC Order issued on July 25, 2001.

Simpson Tacoma Kraft Company (Simpson) submitted a Notice of Construction (NOC) Application dated October 10, 2000 proposing modifications to Recovery Furnace No. 4. This NOC approval addresses replacing two existing Laminar air heaters (LAHs) with an economizer. Both technologies recover heat from the Recovery Furnace No.4's hot exhaust gases and use it to preheat the combustion air fed to the boiler to improve combustion efficiency. The project does not increase the maximum furnace operating rate or short-term (hourly) emission rates. It will, however, allow Recovery Furnace No.4 to operate at its capacity more hours per year, resulting in higher potential annual emissions from Recovery Furnace No. 4 and related pulping units of CO, NOx, SO2, VOC, PMlO, PM, and TRS. This is because particulate matter in the exhaust gases fouls the LAHs, requiring regular cleaning, during which operation is partially curtailed. The economizer project eliminates the need to clean the LAHs and so restores

Recovery Furnace No.4's design capacity. Only potential NOx, CO, SO2, and VOC emission increases are great enough to trigger review of PSD applicability. Sufficient contemporaneous decreases in actual emissions of these parameters exist, however, such that there will be no net emissions increases resulting from the change, and PSD is therefore not triggered. These reductions are formalized in emission reduction credits (ERC) granted for the shutdown of Recovery Furnace No.3 and Smelt Vent No.3 in Order DE 99-AQI002. These reductions are made federally enforceable by Order DE 99AQIS-94, which prohibits Simpson from operating Recovery Furnace No.3 and Smelt Vent No.3, the source of the contemporaneous emissions decreases that allow this project to net out of PSD applicability.

Implementation of this Order means that Simpson will have consumed additional ERCs, granted in Order DE 99-AQI002, in the following amounts: 91 tons of CO; 56 tons of NOx; 14 tons of SO2; 38.5 tons of VOCs; 7 tons of PMlO; 11 tons of PM (designated as TSP in the ERC certificate); and 6 tons of TRS.

Pursuant to New Source Review (NSR) regulations in the Washington Administrative Code (WAC) 173-400-110, 173-400-111 and 173-460-040, and based upon the complete NOC Application submitted by WestRock Tacoma and the technical analysis performed by Ecology, Ecology found the following according to the original NOC Order issued on July 25, 2001.

1. The proposed project will comply with all applicable new source performance standards, as provided for by earlier action taken under Order No. DE99AQIS-94.
2. The proposed project, if constructed and operated as herein required, will comply with all national emission standards for hazardous air pollutants and emission standards adopted under Chapter 70.94 RCW.
3. The proposed project, if constructed and operated as herein required, will provide all known, available and reasonable methods of emission control.
4. Emissions from the proposed project, if constructed and operated as herein required, will not cause or contribute to a violation of any ambient air quality standard.
5. As construed for this project, Best Available Control technology (BACT) as required under WAC 173-400-113 and Toxic Best Available Control Technology (T-BACT) as required under WAC 173-460-060 will be used for control of emissions.
6. The net change in each category of air emissions, after the use of available ERCs, is less than the corresponding PSD significance level. Changes in air emissions in tons/year resulting from the proposed recovery furnace modifications are presented in Table 1, which is attached to this Order[1].The permit analysis assumed a baseline prior to the 1999 Recovery Furnace No.4 project, which installed an indirect liquor heater (ILH) and tertiary combustion air system, approved under Order DE 99AQIS-94. In other words, the baseline is established for a period of operation consistent with the relevant historic

emission status of the unit.

7. The potential CO mass emission rate from Recovery Furnace No.4 after the proposed modification is projected to be 1672 tons/year based on an annual average CO concentration of 400 ppm in the stack emissions. This 1672 tons/year annual CO mass emission, which was used for the PSD applicability review netting analysis, is set as a limit by this Order, and therefore is enforceable.

8. The potential SO_2 mass emission rate from Recovery Furnace No.4 after the proposed modification is projected to be 669 tons/year based on an annual average SO_2 concentration of 70 ppm in the stack emissions. This 669 tons/year annual SO_2 mass emission rate, which was used for the PSD applicability review netting analysis, is set as a limit by this Order, and therefore is enforceable.

9. The potential NO_x mass emission rate from Recovery Furnace No.4 after the proposed modification is projected to be 515 tons/year based on an annual average NO_x concentration of 75 ppm in the stack emissions. This 515 tons/year annual NO_x mass emission rate, which was used for the PSD applicability review netting analysis, is set as a limit by this Order, and therefore is enforceable. The new 515 tons/year limit replaces the 475 tons/year limit imposed by Order No. DE 99AQIS-94.

Footnotes

1. Although this the original issuance of this Order indicated that a table was attached, no table was attached in the final order.

CONDITIONS

1. Any activity undertaken by WestRock or others, in a manner which is inconsistent with the application and this determination, shall be subject to Department of Ecology enforcement under applicable regulations. Nothing in this determination shall be construed so as to relieve WestRock of its obligations under any state, local, or federal laws or regulations.

2. WestRock shall comply with the requirements below in Table 2.

Table 2. Recovery Furnace No.4 Limits

Parameter	Limit (shall not exceed)	Reporting and Monitoring	Applicable Requirements (basis of authority)
CO	400 ppm @ 8% O_2, 30-day rolling average	EPA Methods 10, 10A, or 10B are the reference test methods. Monitor continuously using an approved CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, Performance Specification 4. Report 30-day averages and excess emissions monthly.	Order No. DE 01AQIS-3114 (BACT limit)
CO	1672 tons/year as 12-month rolling total	Report 12-month rolling total monthly.	Order No. DE 01AQIS-3114 (limit makes potential to emit assumptions enforceable)
SO_2	150 ppm @ 8% O_2, 30-day rolling average	EPA Method 6 is the reference test method. Monitor continuously using an approved CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, Performance Specification 2. Report 30-day averages and excess emissions monthly.	Order No. DE 01AQIS-3114 (BACT limit)
SO_2	669 tons/year as 12-month rolling total	Report 12-month rolling total monthly.	Order No. DE 01AQIS-3114 (limit makes potential to emit assumptions enforceable)
NO_x	515 tons/year as 12-month rolling total	Report 12-month rolling total monthly, calculated as shown in footnote a to this table.	Order No. DE 01AQIS-3114 (limit makes potential to emit assumptions enforceable)

Parameter	Limit (shall not exceed)	Reporting and Monitoring	Applicable Requirements (basis of authority)
VOC	0.50 lb/ton black liquor solids (BLS)	At a minimum, sample once per year using EPA Method 25A. An alternative method may be used if approved by Ecology. Use the average of 3 one-hour runs.	Order No. DE 01AQIS-3114 (BACT limit)

a. NO_X mass emission algorithm

$$NO_x(ton) = \frac{lb\ BLS}{day} \times days\ of\ operation \times \frac{87.5\ DSCF\ @\ 8\%\ O_2}{lb\ BLS} \times avg\ NO_x\ (ppm\ @\ 8\%\ O_2) \times \frac{46\ lb\ NO_x}{385\ dscf\ NO_x} \times \frac{\text{ton NO}_x}{2000\ \text{lbs NO}_x}$$

Where $\frac{87.5\ DSCF\ @\ 8\%\ O_2}{lb\ BLS}$ is calculated as shown below

$$\frac{87.5\ DSCF\ @\ 8\%\ O_2}{lb\ BLS} = F \times \frac{HHV}{1{,}000{,}000} \times O_2\ correction$$

Where:

$$F = 9000\ \frac{DSCF}{million\ BTU}\ @\ 0\%\ O_2$$

$$HHV = 6000\ \frac{BTU}{lb\ BLS}$$

$$O_2\ correction = \frac{20.9 - 0}{20.9 - 8}$$

Reference: NCASI Technical Bulletin No. 646, pg. 16

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. “Date of receipt” is defined in RCW 43.21B.001(2).

To appeal you must do both of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 **Pollution Control Hearings Board** 1111 Israel Road SW STE 301 Tumwater, WA 98501	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 **Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

MORE INFORMATION

- **Pollution Control Hearings Board**
  www.eho.wa.gov/Boards_PCHB.aspx
- **Chapter 43.21B RCW, Environmental Hearings Office – Pollution Control Hearings Board**
  http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21B
- **Chapter 371-08 WAC – Practice and Procedure**
  http://apps.leg.wa.gov/WAC/default.aspx?cite=371-08
- **Chapter 34.05 RCW – Administrative Procedure Act**
  http://apps.leg.wa.gov/RCW/default.aspx?cite=34.05
- **Chapter 70.94 RCW, Washington Clean Air Act**
  http://apps.leg.wa.gov/RCW/default.aspx?cite=70.94
- **Air Quality Rules**
  https://ecology.wa.gov/Air-Climate/Air-quality/Business-industry-requirements/Permits-for-burning-industrial

SIGNATURES

Reviewed by:

Emily Toffol, P.E.
Environmental Engineer
Solid Waste Management Program

Date _____

Signature Authority:

James DeMay, P.E.
Industrial Section Manager
Solid Waste Management Program

Date _____